



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

**ReEnergy Fort Fairfield LLC
Aroostook County
Fort Fairfield, Maine
A-181-70-I-A**

**Departmental
Findings of Fact and Order
Part 70 Air Emission License
Amendment #1**

FINDINGS OF FACT

After review of the Part 70 License amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	ReEnergy Fort Fairfield LLC (REFF)
LICENSE TYPE	Part 70 Administrative Revision
NAICS CODES	22111
NATURE OF BUSINESS	Electric Generating Station
FACILITY LOCATION	Cheney Grove Rd Fort Fairfield, Maine

ReEnergy Fort Fairfield LLC (REFF) is a wood/biomass-fired electric generating facility capable of generating approximately 30 net megawatts of electricity. The plant consists of one steam generating unit (Boiler #1) which fires primarily sawmill residues, whole tree chips, and other wood fuels. Fuel oil is used during startups, shutdowns, flame stabilization, and emergency situations only. Boiler #1 supplies steam to a steam turbine for the generation of electricity.

In March 2013, the Department approved REFF's request to temporarily install, operate, and test a Selective Non-Catalytic Reduction (SNCR) system designed by Fuel Tech known as "NO_x OUT."

In September 2013, REFF licensed the permanent installation of the NO_x OUT system through New Source Review (NSR) license A-181-77-1-A (9/17/13). REFF has requested that the provisions of this NSR license be incorporated into their Part 70 permit.

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B. Application Classification

A Part 70 Administrative Revision is for license changes that correct typographical errors; change the name, address, or phone number of any person or facility identified in the Part 70 license or a similar administrative change at the Part 70 source; or result in more frequent monitoring, reporting, recordkeeping or testing requirements. As defined in 06-096 Code of Maine Rules (CMR) 100, a Part 70 Administrative Revision may also be used to incorporate the terms and conditions of a major New Source Review air license issued pursuant to 06-096 CMR 115 into a Part 70 license.

The requested revision meets the definition of a Part 70 Administrative Revision and has been processed under *Part 70 Air Emission License Regulations*, 06-096 CMR 140 (as amended).

C. Revision Description

Operation of the NO_x OUT system may enable REFF to compete in New England's renewable energy market as a low emissions renewable energy producer. In order to minimize ammonia slip (NH₃-slip) REFF plans to operate this system only when necessary to participate in the renewable energy market.

The NO_x OUT system consists of a reagent storage and delivery system for the injection of a urea reagent solution into the combustion gases of the boiler.

A 50% urea reagent solution is delivered to the facility and stored in a 10,000 gallon tank. Diluted urea is metered to distribution modules. The distribution modules channel the urea mixture out to a series of injectors which penetrate the boiler walls.

The injectors atomize the mixture before it enters the boiler and mixes with the combustion flue gas. Within the boiler the urea mixture reacts with the flue gas to form nitrogen, carbon dioxide, and water.

Use of the NO_x OUT system can involve emissions of NH₃-slip similar to the currently licensed ECOTUBE system (when urea or ammonia injection is utilized). REFF performed stack testing to demonstrate that emissions of NH₃ were within REFF's currently licensed limit of 40 ppm_{dv} (corrected to 12% CO₂) when operating the NO_x OUT system.

REFF intends to maintain the ECOTUBE system for use when additional over-fire air can aid in control of combustion. However, to date, neither urea nor NH₃ have been used with the ECOTUBE system and REFF shall not use any urea or

NH₃ injection in the ECOTUBE at the same time as the NO_x OUT system is in operation.

REFF has not requested any changes in any licensed emission limits as part of this amendment.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that emissions from this source:

- will receive Best Practical Treatment;
- will not violate applicable emissions standards; and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants the Part 70 License A-181-70-I-A pursuant to 06-096 CMR 140 and the preconstruction permitting requirements of 06-096 CMR 115 and subject to the conditions found in Air Emission License A-181-70-G-R and in the following conditions.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in 06-096 CMR 115 for making such changes and pursuant to the applicable requirements in 06-096 CMR 140.

For each specific condition which is state enforceable only, state-only enforceability is designated with the following statement: **Enforceable by State-only.**

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

The following are New Conditions:

(32) NO_x OUT System

- A. REFF has installed and has the capability to operate the NO_x OUT system for control of NO_x emissions from Boiler #1. REFF is not required to operate the NO_x OUT system, provided Boiler #1 does not exceed the NO_x limits established in the Part 70 permit. REFF shall maintain a system of maintenance, inspection and repair for the NO_x OUT system, which includes

periodic inspection of the system to ensure the system's proper function and operation. REFF shall document compliance by means of a maintenance, inspection and repair log (written or electronic), in which REFF shall record all routine maintenance as well as all inspection dates, findings, and subsequent corrective actions. [06-096 CMR 115, BACT (A-181-77-1-A)]

- B. Whenever the NO_x OUT system is in use, REFF shall maintain records of urea injection operations, including dates and times urea injection is utilized and amounts of urea reagent used on a daily, monthly, and 12-month rolling total basis. [06-096 CMR 115, BACT (A-181-77-1-A)]
- C. REFF shall not operate urea injections in the ECOTUBE system at the same time that the NO_x OUT system is in operation. Compliance shall be demonstrated by the records required to be kept for each system which show the dates and times of use of each system. [06-096 CMR 115, BACT (A-181-77-1-A)]

(33) **New Source Review**

REFF is subject to all previous New Source Review (NSR) requirements summarized in this Part 70 air emissions license and the NSR requirements remain in effect even if Air Emissions License, A-181-70-G-R expires.

DONE AND DATED IN AUGUSTA, MAINE THIS 16 DAY OF May, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Patricia W. Aho*
PATRICIA W. AHO, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-181-70-G-R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/24/14

Date of application acceptance: 4/24/14

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Poland, Bureau of Air Quality.

